HOUSING MARKET INFORMATION

HOUSING MARKET ASSESSMENT

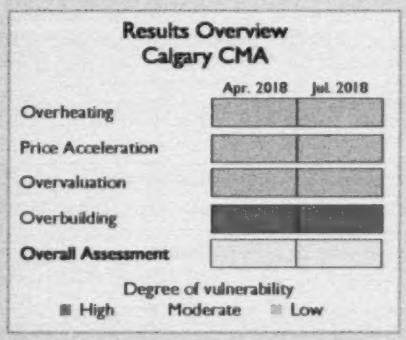
Calgary CMA

Date Released: Third Quarter 2018

Canada

CMHC SCHL

Highlights



- CMHC's HMA Framework detected a moderate degree of vulnerability in the overall assessment for Calgary[1].
- The number of completed and unsold units per capita were above the critical threshold for overbuilding, largely due to the multiple segment of the market.
- House prices remain consistent with economic and demographic fundamentals.
- Demand fundamentals placed downward pressure on house prices, buyers' market conditions persisted.

HMA Overview[2]

As Canada's authority on housing, CMHC contributes to market stability by providing information on potential imbalances that could affect housing markets. With the HMA, CMHC offers information and analysis that can help Canadians make more informed decisions.

The HMA combines the results from a technical framework with insights gained through CMHC's Market Analysts' knowledge of local market conditions. These insights position CMHC to provide additional context and interpretation to the results of the HMA framework.

The HMA framework detects degrees of vulnerability in local housing markets by identifying imbalances. An example would be the detection of overbuilding, a situation in which the inventory of unsold new homes accumulates due to supply outpacing demand. Such an imbalance could be resolved by an adjustment in house prices. As an example, lower prices would help resolve an excess supply imbalance by supporting stronger demand and/or reducing supply. However, other unexpected developments that do not originate from the housing market could accentuate or reduce an imbalance.

Colour codes indicate the degrees of market vulnerability. The HMA is a comprehensive framework that considers the intensity of signals of imbalances (that is, how far the indicator is from its historical average), and the persistence over time. Generally, low intensity and persistence are associated with potentially low degree of vulnerability. As the number of intense and persistent signals increases, the associated degree of vulnerability increases.

In Detail

Overheating

The sales-to-new listings ratio (SNLR) was 52%, down from the previous quarter and remains well below the threshold for overheating. Since the critical threshold for the SNLR is 85%, the evidence of overheating remained low. The SNLR fell primarily due to a decline in sales.

Sales declined in the first quarter of 2018, falling to a two-year low. The decline reversed an increasing trend from mid to late 2017. However, the rising sales towards the end of 2017 was likely the result of buyers moving in advance of new underwriting standards for low ratio loans that took effect in January 2018. Some of these buyers would have likely otherwise waited until the first quarter to purchase a home.

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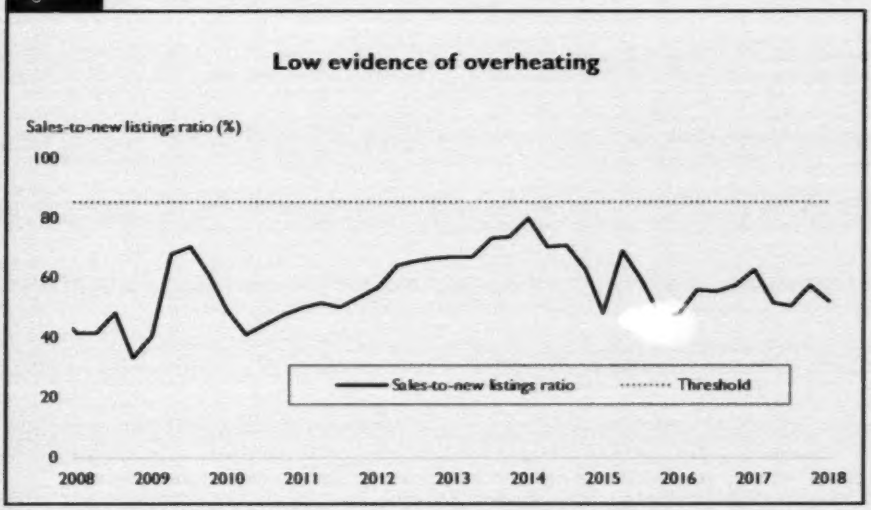
[1] Results are based on data as of the end of March 2018 and local market intelligence up to the end of June 2018. CMHC continuously monitors market developments and will issue HMA updates on a quarterly basis.

[2] A detailed description of the framework is available in the appendix of the National edition.

Figure 1



Source: CREA, calculations (threshold) by CMHC
Last data point: 2018Q1

Quarterly new listings have followed a flat trend since the end of 2009, staying between 10,000 and 12,000 units per quarter, on average. The first quarter of 2018 stayed within this range, but looking at monthly data to the end of May 2018, single detached homes have pushed new listings to the upper range of recent history, indicating a growing inventory of homes for sale in Calgary, which places downward pressure on prices.

In addition to indicators considered in the HMA framework, active listings trended upward to the end of May 2018 as did days-on-market, while the sale-to-list price trended downwards. Taken together, the picture for Calgary is indicative of buyers' market conditions.

Braden Batch
Senior Analyst, Economics (Calgary)

"Demand fundamentals were consistent with downward pressure on home prices in Calgary, while evidence of overbuilding was detected in the first quarter of 2018. However, if the decline in per capita inventory of complete and unsold units persists, the level of overbuilding could move below the critical threshold next quarter."

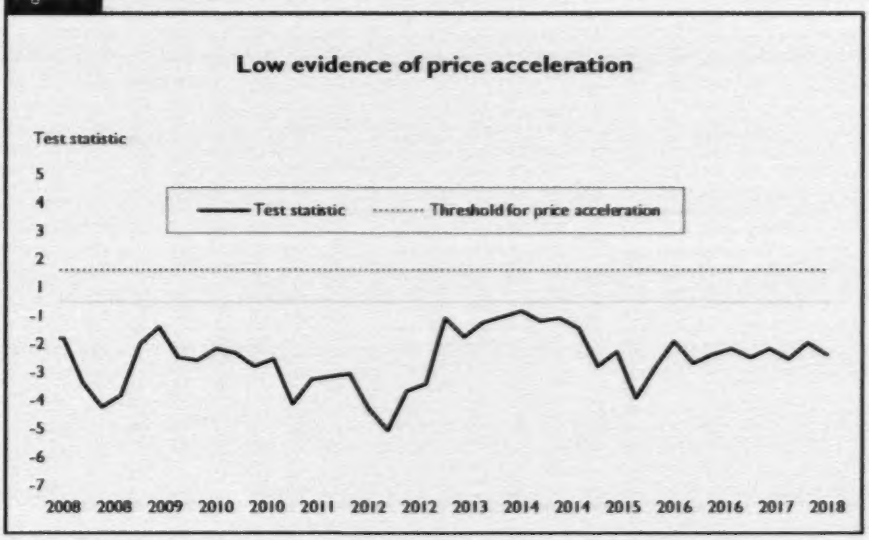
Price Acceleration

CMHC's HMA framework detected low evidence of price acceleration in the first quarter of 2018. Price acceleration is unlikely to be present in the Calgary CMA while market conditions favour the buyer. As long as the Calgary housing market is characterised by high inventory and falling sales, conditions are not conducive for price acceleration. Calgary CMA average house prices continued to trend downward in the first quarter of 2018 as the Teranet® house price index declined 1% from the fourth quarter of 2017 to the first quarter of 2018. Compositionally, apartment units drove house price depreciation. A 3% YoY decline in CREA's benchmark apartment price contrasts with the single detached benchmark price which remained flat.

Overvaluation

CMHC's HMA framework identified low evidence of overvaluation in Calgary. First quarter actual house prices were in line with the predicted price levels given by fundamental

Figure 2

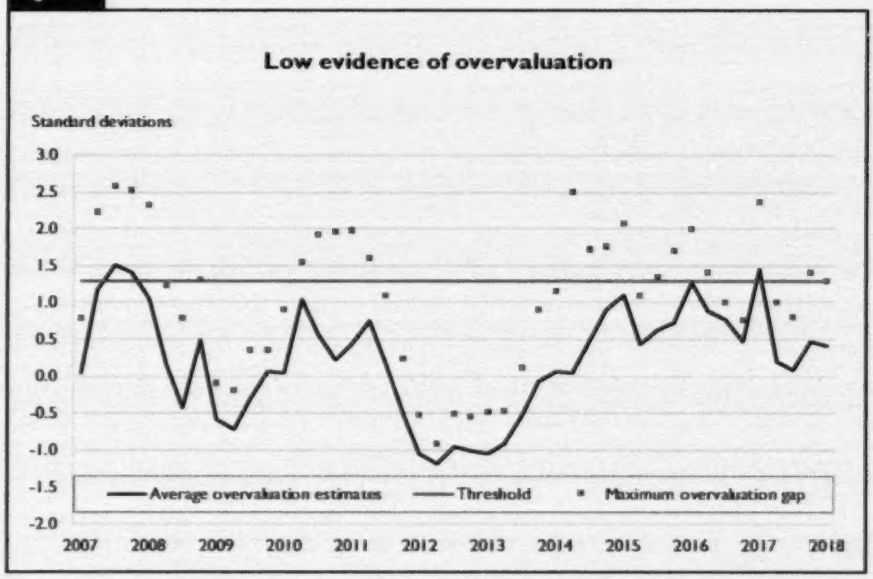


Source: CREA, CMHC calculations
Last data point: 2018Q1

factors in all six overvaluation models. However, one supply-side model of overvaluation predicted values of the Teranet price index that came close to the critical threshold for overvaluation.

Demand fundamentals weakened along two factors contained in the models. The young adult population, a proxy for household formation and first-time buyers, declined for the fifth consecutive quarter. In addition, five-year mortgage rates increased in the first quarter, which increased mortgage servicing costs. Further, changes to macro-prudential policy took effect in January, adding stress testing to low ratio loans. Therefore, despite improvements in full-time employment and personal disposable income, house prices declined in the first quarter of 2018. In summary, the evidence of overvaluation was determined to be low.

Figure 3



Sources: CREA, Statistics Canada, Teranet and National Bank of Canada, and calculations by CMHC.
Note: The average estimate of overvaluation is the average gap between actual house prices and price levels estimated from a group of selected models. These include demand, supply, hybrid, and affordability models, each of which is estimated using four measures of house prices to generate sixteen unique estimates of overvaluation. The selection of models is conducted with a set of cointegration tests, and the selected models are estimated with Dynamic Ordinary Least Squares (DOLS). The maximum overvaluation gap is obtained from the model that has the largest gap between the actual price and the estimated price. The threshold is fixed at a critical value of 1.29 for a confidence level of 80%. Overvaluation is signaled when overvaluation estimates lie above the threshold.
Last data point: 2018Q1

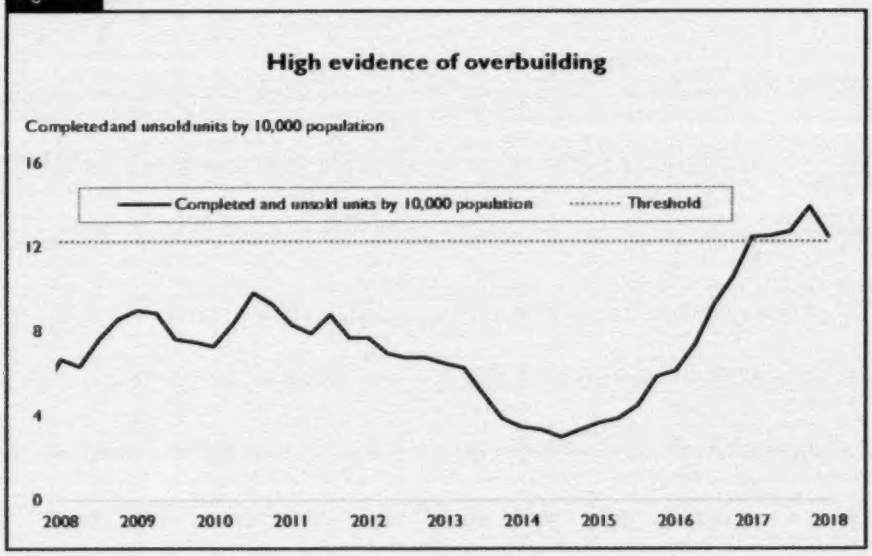
Overbuilding

Evidence of overbuilding remained high in Calgary. Per capita complete and unsold inventory remained above the critical threshold, despite trending downward. The peak inventory count for apartment units, the largest share of inventory, occurred in December 2017, and has since declined. Recent apartment starts have pushed construction levels upward, while current construction levels imply a similar flow of new apartments in 2018 as in 2017.

The absorption rate of condos at completion averaged 83% YTD as of May 2018 compared to 67% in the same period last year, helping to reduce inventory and mitigating the same buildup of inventory experienced in 2017. In contrast, inventories trended higher for ground-oriented housing types in the first quarter, outpacing absorptions. However, this trend was not large enough to effect the overall downward direction of total complete and unsold housing units which is dominated by apartment units.

The apartment vacancy rate also contributed to the assessment of overbuilding in Calgary. The rental apartment vacancy rate was 6.3% in October 2017, which is above its critical threshold.

Figure 4



Source: Statistics Canada and CMHC
Last data point: 2018Q1

Overview of the Housing Market Assessment analytical framework

To obtain an accurate picture of the overall state of the housing market, it is important to consider multiple data points and lines of evidence rather than relying on just one measure or indicator.

The Housing Market Assessment (HMA) analytical framework provides a comprehensive and integrated view that relies on a combination of signals from several indicators to detect imbalances in housing markets.

Specifically, the framework considers four main factors that may provide an early indication of vulnerability in the housing market: (1) overheating (when demand outpaces supply); (2) sustained acceleration in house prices; (3) overvaluation of house prices in comparison to levels that can be supported by housing market fundamentals (listed below); and, (4) overbuilding (when the inventory of available housing units is elevated).

For each factor, the framework tests for: (1) the incidence of signs of vulnerability, but also considers; (2) the intensity of the signals, i.e. how their magnitude compares with their historical average or how consistent they are with known or suspected house price bubbles, such as for Toronto in the late 1980s and early 1990s; and, (3) the persistence of signals over time.

Generally, a situation in which we detect few signals with low intensity or lack of persistence is associated with a low degree of vulnerability. Conversely, as the intensity, number, and/or persistence of the signals increases, so does the evidence of imbalances in the housing market.

The framework takes into account demographic, economic, and financial determinants of the housing market such as population, personal disposable income, and interest rates to detect vulnerability. The framework also takes into account developments in both resale and residential construction markets.

The framework was developed on the basis of its ability to detect vulnerable housing market conditions in historical data, such as the house price bubble Toronto experienced in the late 1980s and early 1990s. The ability of the HMA to detect vulnerabilities relies on the assumption that historical relationships between prices and fundamental drivers of housing markets have not changed.

Housing Market Assessment Factors

Overheating

Overheating is caused by demand significantly and persistently outpacing the supply of housing. The sales-to-new listings ratio is used as an indicator to assess possible overheating conditions in the existing home market. To identify signs of overheating, the framework compares the sales-to-new listings ratio to thresholds. When demand is strong relative to supply, house prices typically grow at a faster rate. Sustained overheating on the existing home market may lead to acceleration in house prices for existing and new homes. However, as supply and demand begin to balance out, indicators of overheating (and acceleration) would begin to soften and house prices would gradually moderate.

Acceleration in House Prices

Under balanced market conditions, house prices are expected to increase over time, in line with increases in households' cost of living. House price acceleration occurs when the growth in house prices strengthens over time on a persistent basis. Acceleration in house prices over an extended period can cause their pace of increase to depart from the overall price inflation and eventually lead to overvaluation.

To assess acceleration in house prices, the HMA framework uses a statistical test* that was developed to identify periods of accelerating asset prices.

Overvaluation

Overvaluation is detected when house prices remain significantly above the levels warranted by fundamental drivers of housing markets such as income, population, and actual and expected financing costs.

The HMA framework uses combinations of different house price measures and models to estimate house price levels warranted by fundamental drivers. The difference between observed house prices and their estimated levels consistent with housing market fundamentals allows for an estimation of the degree of over- and undervaluation. The use of different price measures and models improves the reliability of results.

Overbuilding

Overbuilding is detected when the supply of readily available housing units significantly exceeds demand. In such a context, downward pressure on house prices would occur until the excess supply is eventually absorbed. To assess signs of overbuilding in the housing market, the HMA framework uses two indicators that relate to the supply of readily available housing units: the rental vacancy rate, and the inventory of completed and unsold housing units per 10,000 population. The HMA framework compares the current level and recent trends in these indicators with thresholds.

Note 1: Colour codes indicate the degree of market vulnerability. The HMA reflects a comprehensive framework that not only tests for the presence or incidence of signals of imbalances (that is, how far the indicator is from its historical average), but also considers the intensity and the persistence of these signals over time. Generally, low intensity and persistence are associated with a lower vulnerability. As the number of persistent signals increases, the evidence of an imbalance increases.

Note 2: Results at the CMA level are not segmented by housing type or neighbourhood. They represent an assessment of the entire CMA. However, specific CMA reports provide further detailed analysis of these markets.

Note 3: The colour scale extends to red only for those factors that have multiple indicators that can identify imbalances. As a result, only overvaluation and overbuilding can receive a red rating, since they are assessed using more than one indicator.

Note 4: To ensure the framework is as current as possible, on a regular basis, we undertake a model selection process whereby our house price models for overvaluation are tested for statistical significance at the national and CMA level. The result of this process may change the number of indicators showing vulnerability from the previous assessment.

* See Phillips, Wu and Yu (2008) "Explosive Behaviour in the 1990s NASDAQ When Did Exuberance Escalate Asset Values?" for further details on the methodology.

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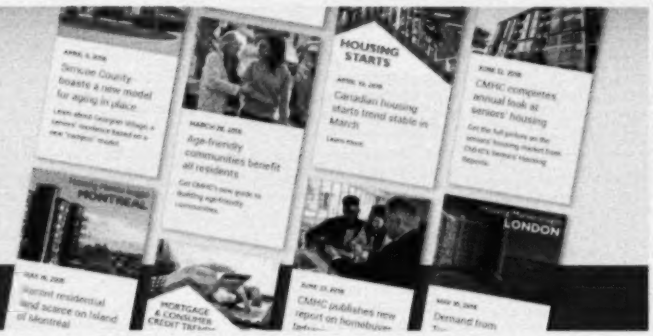

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